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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,216	03/17/2004	Rick C. Stevens	LMCO.013PA	3553
40581 7590 07/10/2008 CRAWFORD MAUNU PLLC 1150 NORTHLAND DRIVE, SUITE 100 ST. PAUL, MN 55120				
EXAMINER SHAN, APRIL YING				
ART UNIT		PAPER NUMBER		
2135				
NOTIFICATION DATE		DELIVERY MODE		
07/10/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

crawford@ip-firm.com

Office Action Summary

Application No.

10/802,216

Applicant(s)

STEVENS ET AL.

Examiner

APRIL Y. SHAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-12 and 19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 3-12 and 19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Response to Argument/Amendment

1. The Applicant's amendment, filed 09 April 2008, has been received, entered into the record, and respectfully and carefully considered.
2. As a result of the amendment, claims 1, 3-4, 7 and 12 have been amended. Claims 2 and 13-18 are canceled. Claims 1, 3-12 and 19 are now presented for examination.
3. Any objection/rejection not repeated below is withdrawn due to Applicant's amendment.
4. Please note the Applicant unintentionally lists claim 1 as original, which is incorrect. In fact, claim 1 has been amended.
5. Applicant's arguments with respect to claims 1, 3-12 and 19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 3-4, 8, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,068,617 (hereinafter '617) in view of U.S. Patent No. 6,408,019 (hereinafter '019').

As per **claim 1**, '617 discloses a node configured for communications at multiple levels of security, comprising:

a plurality of seedable code generators, wherein each code generator is configured to generate a different set of codes (e.g. col. 3, lines 12-24);

a plurality of CDMA encoders respectively coupled to the code generators, wherein each CDMA encoder encodes input data using the set of codes generated by the coupled code generator (e.g. fig. 5);

a plurality of CDMA decoders respectively coupled to each code generator, wherein each CDMA decoder decodes input data using the set of codes generated by the coupled code generator (e.g. fig. 6, col. 5, lines 21-35);

a node controller coupled to the plurality of encoders, decoders, and code generators, the controller arranged to provide respective input seeds to the code generators, and to provide respective sets of codes from the code generators to paired encoders and decoders (e.g. col. 2, lines 3 – 19, col. 2, line 50 – col. 3, line 25, and col. 4, line 66 – col. 5, line 67, col. 6, lines 40-56, col. 10, lines 16-43, fig. 5, fig. 7, fig. 13, claim 1 and claims 9-10);

an interconnect interface coupled to the plurality of encoders and decoders, the interconnect interface arranged to combine encoded data from the encoders into an output signal and transmit the output signal, and for an input signal received by the interconnect interface provide the input signal to each decoder (e.g. col. 4, line 66 – col. 5, line 20).

'617 implicitly discloses wherein the controller is further configured to initialize the code generators with respective first seeds and reset each code generator with respective second seeds (e.g. col. 3, lines 1-11).

'617 does not expressly disclose wherein the controller is further configured to initialize the code generators with respective first seeds and reset each code generator with respective second seeds.

However, this well known feature is disclosed in '019. '019 discloses ".....separate control links...initialize and reset noise generators, e.g. seeds for random number generators...initialize or reset random number generators", which met the claimed limitation of wherein the controller is further configured to initialize the code generators with respective first seeds and reset each code generator with respective second seeds.

It would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate '019's wherein the controller is further configured to initialize the code generators with respective first seeds and reset each code generator with respective second seeds into '617 motivated by "place less of a burden on support communications" and "to obtain the parameters required to..initialize or reset random number generators (e.g. col. 17, lines 24-50 of '019)

As per **claim 3**, '617 – '019 discloses a node as applied above in claim 1. '617 further discloses wherein the controller is further configured to reset a code generator with a second seed responsive to receipt of the second seed via the interconnect interface and the decoder coupled to the code generator (e.g. fig. 5, fig. 7, col. 6, lines 40-56, claim 5 and claim 18).

As per **claim 4**, '617 - '019 discloses a node as applied above in claim 1. '617 further discloses wherein the controller is further configured to provide a second seed to an encoder for encoding with a previous seed and reset the

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code generator coupled to the encoder with the second seed (e.g. fig. 5, col. 4, line 66 – col. 5, line 20).

As per **claim 8**, '617 - '019 discloses a node as applied above in claim 1. '617 further discloses wherein the interconnect interface is compatible with a radio-frequency interconnect (e.g. col. 4, line 66 – col. 5, line 20).

As per **claims 12 and 19**, they are rejected using the same rationale as rejecting claim 1 above.

10. Claims 5-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,068,617 (hereinafter '617') in view of U.S. Patent No. 6,408,019 (hereinafter '019') and U.S. Pub. No. 2005/0041972 (hereinafter '972')

As per **claims 5-7 and 9**, '617 –'019 discloses a node as applied above in claim 1. '617 - '019 does not expressly disclose wherein the interconnect interface is compatible with a ring interconnect or a bus interconnect or a start interconnect or a free-space optical interconnect.

However, '972 discloses wherein the interconnect interface is compatible with a ring interconnect or a bus interconnect or a start interconnect or a free-space optical interconnect (e.g. par. [0003] – [0006]).

It would have been obvious to a person with ordinary skill in the art to combine '972's common features with '617 – '019 since it is general knowledge

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in the art that passive optical networks using a Code Division Multiple Access mode are realized in stars, buses, ring and optical interconnect.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,068,617 (hereinafter '617) in view of in view of U.S. Patent No. 6,408,019 (hereinafter '019') and U.S. Patent No. 5,184,347 (hereinafter '347')

As per **claim 10**, '617 – '019 discloses a node as applied above in claim 1. '617 further discloses wherein the controller includes a register having an input port coupled to a code generator and an output port coupled to an encoder and to a decoder (e.g. register 38 in fig. 5).

'617 – '019 does not expressly disclose the buffer is FIFO buffer. However, this well known feature is disclosed in fig. 4 of '347. It would have been obvious to a person with ordinary skill in the art at the time of the invention to combine such well known feature of '347 with '617 – '019 in order to process data more smoothly.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,068,617 (hereinafter '617) in view of in view of U.S. Patent No. 6,408,019 (hereinafter '019') and examiner's official notice.

As per **claim 11**, '617 – '019 discloses a node as applied above in claim 1. '617 further discloses wherein:

each of the plurality of decoders includes an associated set of sub-decoders having respective input ports arranged to receive input encoded data

and respective output ports arranged to output decoded data values (e.g. fig. 6 and col. 5, lines 21-35); and

the controller includes, a first cipher translation table having an first input port coupled to a code generator, a second input port arranged to receive an input data value, and an output port coupled to an encoder, the first cipher translation table configured with data values and associated random codes generated by the code generator, wherein the first cipher translation table outputs the random code associated with an input data value (e.g. abstract and claim 11); and

data selection logic having a first plurality of input ports coupled to the sub-decoders, a second plurality of input ports arranged to receive respective random codes from the second cipher translation table, a code input port coupled to the first output port of the second cipher translation table, and an output port arranged to output a selected decoded data value, wherein the selection logic is arranged to select one of the decoded data values responsive to a match of an associated random code used by a sub-decoder in generating the decoded data value and a random code received on the code input port from the second cipher translation table upon input of the decoded data value at the first input port (e.g. abstract).

'617 -'019 does not expressly disclose a second cipher translation table. However, the examiner takes official notice that having a second identical table

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to the sub-decoders is well known in the art since it produces predictable results of provides the each random code to a respective one of the sub-decoders the same way as the first cipher translation table.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (See PTO – 892)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to APRIL Y. SHAN whose telephone number is (571)270-1014. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/April Y Shan/
Examiner, Art Unit 2135

/KimYen Vu/

Supervisory Patent Examiner, Art Unit 2135